What is claimed is:

1. A method for continuous casting bars, billet, and slabs from a melt in dimensional ranges of approximately 20 to 150 mm thickness and approximately 600 to 3500 mm width by means of an oscillating, water-cooled casting mold in cooperation with a submerged-entry nozzle, employing casting powder for formation of casting slag, the method comprising the steps of:

measuring local temperatures and local heat flux densities of a casting mold in a meniscus area of the melt critical for the surface quality of a slab; and

maintaining working temperatures of the casting mold plates in the meniscus area by adjusting the operating parameters important for the working temperature within a predetermined temperature range (ΔT).

2. The method according to claim 1, wherein the operating parameters are selected from the group consisting of the quantity of the cooling water, the throughput speed of the cooling water through the casting mold, the casting speed, and the casting powder to be used.

3. The method according to claim 1, wherein the slab is a thin slab.

4. The method according to claim 1, further comprising the step of arranging thermoelements in the casting mold plates at a defined spacing from one another and within a height range above and below the bath level, respectively, for determining the working temperatures of the casting mold plates.

5. The method according to claim 4, wherein the thermoelements are arranged at different depths in the casting mold wall and wherein, based on a temperature difference of at least two of the thermoelements positioned substantially at the same height, the corresponding local heat flux density is calculated.

6. The method according to claim 1, further comprising the step of calculating a maximum temperature course of the wall surface in contact with the melt by means of approximation functions, based on a determination of the course of the local temperatures or the heat flux along a height of the casting mold wall.

7. The method according to claim 6, wherein, when a change of the heat flux density is determined along the height of the casting mold wall as a result of two-dimensional heat transfer in the area of the bath level (M),

the position of the bath level (M) is determined based on an assumed heat density course in a casting mold surface and the known heat flux density in the depth (x) of a casting mold wall.

8. The method according to claim 1, further comprising the step of controlling, when knowing the optimal current density or the maximum surface temperature, the best suited casting mold load for an optimal slab surface formation by adjusting at least one of the operating parameters selected from the group consisting of cooling water quantity and casting speed and casting powder.

9. A device for determining at least one of local temperatures and heat flux densities in a water-cooled continuous casting mold during continuous casting of bars, billets, and slabs, for performing the method according to claim 1, the device comprising:

thermoelements arranged in a paired arrangement in wide lateral sidewalls of the casting mold in an area above and below a bath level and with approximately identical spacing from the contact surface of the casting mold wall with the melted liquid metal;

a computer;

the thermoelements connected via signal lines to

the computer;

the computer being configured to calculate, based on measured temperatures or heat flux density, a surface temperature of the casting mold wall in the meniscus area;

the computer being configured to control a preferred working temperature of the casting mold wall within a predetermined temperature range (ΔT) by adjusting the operating parameters selected from the group consisting of cooling water quantity, casting speed, and casting powder.